

*Labidocera Darwinii.*

There being as yet only one species in this family no specific description need be given.

Colour blue-green, sometimes with brown spots.  $\frac{1}{10}$ th inch in length.

*Hab.* Atlantic Ocean, lat. 38° south, in the open sea off the coast of Patagonia.

I received the specimens from Mr. Darwin, to whom I am indebted for great kindness and advice, and who has kindly permitted me to call it after him.

EXPLANATION OF PLATE I.

*Fig. 1.* *Labidocera Darwinii.* Male.

*Fig. 2.* Second pair of antennæ.

*Fig. 3.* Anterior antenna. 3 *a.* Prehensile apparatus open. 3 *b.* Ditto closed.

*Fig. 4.* Mandible.

*Fig. 5.* First pair of maxillipeds.

*Fig. 6.* Second ditto.

*Fig. 7.* Third ditto.

*Fig. 8.* Thoracic leg: 1st, 2nd, 3rd, and 4th pair.

*Fig. 9.* Posterior thoracic legs. Male. 9 *a.* Left leg more magnified to show the penis. 9 *b.* Apical joint of penis.

*Fig. 10.* Posterior thoracic legs. Female.

*Fig. 11.* Abdomen. Female.

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IV.—*Characters of several Helices from West Australia and the Mauritius; with Notes on some species of Cyclostoma from Borneo.* By W. H. BENSON, Esq.

1. *Helix plectilis*, nobis, n. s. *Benson*

Testa subobtectate perforata, globulosa, albida, opaca, valde rugosa, superne rugis perobliquis elevatis, angulato-flexuosis, irregularibus, subtus versus umbilicum rectis, radiatis, munita; spira elevatiuscula, suturis distinctis, apice obtuso; anfractus 4, convexis, ultimo antice deflexo; apertura circulari, perobliqua, peristomate undique expanso, reflexiusculo, subcontinuo, marginibus approximatis, conniventibus, callo lato junctis, columellari late reflexo, umbilicum plus minusve obtegente.

Diam. major 15, minor 12, axis 10 mill.

*Hab.* ad oras sinus "Shark's Bay" dicti Australiæ Occidentalis.

Remarkable for the bold, deeply fretted sculpture of the upper side, extending below the periphery, and then merging into moderate radiating folds. In form it wonderfully resembles *H. nivosa*, Sow., of Porto Santo, but differs in the partly covered umbilicus, the expansion and reflexion of the peristome, the cir-

cular aperture, which reminds the observer of that of *H. spiriplana*, and the more remarkable sculpture, in which the crumpled wrinkles are again obsoletely punctate. It seems to have some characters in common with the larger species *H. Janellei*, Le Guill., an inhabitant of Northern Australia.

2. *Helix Tescorum*, nobis, n. s.

Testa imperforata, globosa, oblique striata, albida, solidiuscula, spira convexa, suturis impressis, apice obtusiusculo; anfractibus 5, ultimo antice descendente, ventricosus; apertura obliqua, rotundato-lunata, peristomate expansiusculo, intus leviter incrassato, margine columellari dilatato, appresso, pallide luteo.

Diam. major 20, minor 18, axis 14 mill.

*Hab.* cum præcedente ad sinum Shark's Bay.

The single specimen which I have of this shell is apparently in a subfossil state; and, in finer condition, may possibly exhibit more colour. It has quite the habit of the European group *Archelix* of Albers, and is closely allied to the Madeiran *H. punctulata*.

3. *Helix cygnea*, nobis, n. s.

Testa late umbilicata, orbiculato-depressa, cornea, costulis radiatis obliquis remotiusculis munita; spira vix convexiuscula, suturis excavatis, apice planato; anfractibus  $4\frac{1}{2}$  convexis, ultimo rotundato; apertura subverticali, rotundato-lunata; peristomate acuto; umbilico perspectivo.

Diam. major 4, minor  $3\frac{1}{2}$ , axis  $1\frac{1}{2}$  mill.

*Hab.* ad vicum Perth, Fluvii Cygnorum Australiæ Occidentalis.

Teste Dr. J. F. Bacon.

Distinguished from *H. sublesta* by the more distant ribs, wider umbilicus, colour, and larger size; from *H. Juloides*, Forbes, of the eastern coast of Australia, by its more distant ribs and want of concavity on the upper side.

4. *Helix sublesta*, nobis, n. s.

Testa sublata umbilicata, orbiculato-depressa, supra rufo-cornea, subtus cornea, minutissime costulato-striata, superne planiuscula, suturis impressis; anfractibus 4, ultimo depressiusculo, rotundato; apertura verticali, rotundato-lunata; peristomate acuto; umbilico perspectivo.

Diam. major 3, minor  $2\frac{1}{2}$ , axis 1 mill.

*Hab.* prope urbem Freemantle Fluvii Cygnorum.

Differs from *H. Juloides*, Forbes, by its narrower umbilicus, and the want of concavity in the spire; from *H. cygnea* by the first-mentioned feature and the sculpture. It is nearly allied to

my little Cape species *H. Sabuletorum*, 'Annals,' vol. vii. p. 105; but is at once distinguished by the absence of the distant plicæ, which, at intervals, graduate the striation in that species.

These little shells, and the larger *H. vorticialis* of the Cape, which has a concave spire like *H. Juloides*, affect sandy maritime tracts of widely separated portions of the southern temperate zone.

*Helix Australis*, Menke, the Australian representative of the littoral *Helix Capensis* of Southern Africa, is assigned to the neighbourhood of Swan River. Dr. Bacon, an assiduous and practised collector, has, however, failed to meet with it there, although his attention was particularly directed to it. *Bulimus Melo*, Quoy, was obtained by him near Freemantle, on sandbanks within 20 yards of the sea; and *B. indutus*, Menke, a species not figured in 'Conchologia Iconica,' and there confounded with the American *B. Tupacii*, occurred to him, more inland, in the vicinity of Perth, amongst limestone rocks and bushes, together with an occasional example of *B. bulla*, Menke.

#### 5. *Helix suffulta*, nobis, n. s.

Testa imperforata, turbinato-depressa, albida, supra radiatim minutissime costulato-striata, striis subtus curvatis, mitioribus; spira depresso-conoidea, apice obtusiusculo; anfractibus  $5\frac{1}{2}$  arcte convolutis, ultimo rotundato; apertura lunata, leviter obliqua, peristomate expansiusculo, superne prope insertionem prorsum subangulato, margine columellari subdilato, reflexiusculo, intus dente prominente ad finem exteriorem plicæ obliquæ sito, munito, superne periomphalum excavatum, umbilicum fingentem, penetrante. Diam. major 8, minor 7, axis 5 mill.

*Hab.* in insula Mauritiæ. Teste Sir D. W. Barclay.

This species is singular on account of the construction of the aperture and base of the shell, which recall the structure of the same parts in the Jamaican group which includes *H. Cookiana* and *torrefacta*. In this condition it is probable that the species may have a coloured epidermis. It belongs to the toothed insular group which includes *H. Monodonta*, Grat., a shell, which cannot, as conjectured by Pfeiffer, be merged in his *H. stylodon*; but a change of name becomes requisite on account of the previous employment of the term by Lea. The following is a more extended description of the shell than the brief characters quoted from Grateloup by Pfeiffer.

#### *H. albidens*, Bens.

Testa imperforata, depressa, oblique radiato-striata, non nitente, fusco-cornea, fascia castanea, inferiori pallida adnata, cineta; spira

depresso-conoidea, apice obtuso, sutura impressa; anfractibus  $6\frac{1}{2}$  angustis, ultimo rotundato; apertura lunata, vix obliqua; peristomate acuto, margine columellari calloso, albido, obliquo, abrupte truncato, dentem efformante.

Dian. major 17, minor 15, axis 9 mill.

Syn. *Helix Monodonta*, Grat., nec Lea.

Hab. ad Moka, Insulæ Mauritii, rarissime. Teste Sir D. W. Barclay.

The structure of the tooth is more conspicuous in the young shell, before the columella has become thickened by the callous enamel, and it appears to be caused by the abrupt termination of a winding plait on the columella.

I am indebted to Dr. Traill for specimens of the Bornean species of *Cyclostoma* described in pp. 269–270 of the 10th volume of the 'Annals,' and for information regarding the localities of those and some other species collected by himself.

*C. Anostoma*, nobis, was found by him in the depths of the forest on the island of Labuan, invariably on the leaves of trees.

*C. 4-filosum*, nobis. Pulo Pappan, near Labuan, among dead leaves, on clayey ground. It is difficult of detection from being always covered with a coating of clay.

*C. vitreum*, Lesson. This widely spread species, which is met with from the Straits of Malacca to the islets on the N.E. coast of Australia, is met with in Pulo Pappan, as in the Frankland Isles, on leaves of trees.

*C. sericatum*, Pfr. Pulo Daat, near Labuan, on leaves of trees.

*Pterocyclos biciliatus*, Mousson (*Cycl. Charbonnieri*, Recluz, Jour. Conch. 1851). Sarawak, Borneo, brought by the Dyaks, and containing generally eight or ten eggs.

Mr. Metcalfe had already announced (Zool. Proc. 1851) that *Pt. biciliatus* of Mousson was a native of Borneo, and not of Burmah, as supposed by Mousson. It is clear, from Recluz's figure and detailed description, that it is the same as *Cycl. (Pterocyclos) Charbonnieri*, brought by Dr. Charbonnier from Borneo. The faint indentation noticed by Mr. Metcalfe at the upper part of the aperture is shown, in perfect specimens, to represent the true wing of *Pterocyclos*; and underneath is the obsolete sinus, corresponding to that observable in *Pt. hispidus*, Pearson (*spiraculum*, Sow.), which is also provided with a similar retroverted tube in the suture, behind the aperture. Recluz notices this structure of the peristome, but erroneously considered it to be the indication of a second, but imperfect canal. *Pt. hispidus* and *Pt. biciliatus* have another feature in common in a hispid epidermis; but in the smaller species this is developed into long bristles on the double keel. They both deviate from the true type of *Pterocyclos*, especially *Pt. biciliatus*, in which, as remarked

by Recluz, the operculum resembles a small pulley, instead of being cup-shaped as in the more typical species.

Malvern, November 29, 1852.

NOTE.—In a copy of Pfeiffer's 'Monographia Pneunoporum' just received, I find an amended description of his *Cyclotus Taylorianus* (Zeitschr. 1851), to which, in a subsequent note (p. 50), he assigns *C. Charbonnieri* as a synonym, and remarks that *Pterocyclos biciliatus*, Mousson, is closely allied to it, if not identical. A comparison with the specimen at Zürich will decide. If identical, the name *Taylorianus* must give way to Mousson's designation. The structure of the shell is that of a *Pterocyclos*. The operculum shows it to be an aberrant species, but does not quite conform to that of *Cyclotus*.—W. H. B.

December 22, 1852.

V.—*A Revision of the Genera of some of the Families of Conchifera or Bivalve Shells.* By J. E. GRAY, Ph.D., F.R.S., V.P.Z.S. &c.

SEVERAL of the families of Bivalve Mollusca are well circumscribed, and the genera of other families are well defined, but one of the problems of systematic malacology is the arrangement of the families into groups and into a natural series. Each character which has in succession been chosen, and, indeed, each group of characters which has hitherto been studied and used for this purpose, appears to fail when an extensive series of the animals and their shells have come under examination for the purpose of verifying the system proposed. Under these circumstances, I have thought it desirable to turn my attention to the examination of the smaller groups or families, and to attempt to divide them into natural sections and genera, until some fortunate combination of circumstances should show the systematic zoologist how the families can be placed in a more natural series than the provisional one now adopted. Following out this idea, I have lately, at various times, studied the species of certain families of bivalve shells which appear most to require revision, considering this the more necessary as these shells have hitherto been divided in a most unequal manner. Some genera, as *Cardium*, *Mactra*, *Tellina*, &c., are magazines, containing very many kinds; while many other genera of bivalve shells have been established on a single species, having some slight modification in its cardinal teeth, or some anomalous external form, which, when compared with other species of the family, is not of so much importance as the peculiarities in the shells offered by many kinds which have been left as species in these large

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